

Claims

1. Tone wheel testing apparatus comprising:
  - a surface adjusting means for holding in the horizontal position an annular object to be tested to which a tone wheel is attached, said means comprising a pair of pressing members between which said object is held, and the one of said pressing member having a reference surface with which said tone wheel is contacted in order to make said tone wheel align in the rotary axis direction of said object;
  - a rotatable chucking means for seizing said object so as to make the center of said object align with its rotary center when said object is held by said surface adjusting means; and
  - a magnetic testing sensor disposed adjacent to said tone wheel of said object so as to face each other.
2. The tone wheel testing apparatus as set forth in claim 1, wherein said surface adjusting means comprises a positioning ring and a reference level board as said pair of presser members, between which said object is held in said horizontal position in a manner that said reference level board contacts said tone wheel of said object set on said positioning ring from above,
  - wherein said chucking means comprises an annular frame and chucking jaws capable of moving in and out in its base body, and,
  - wherein said positioning ring is disposed in said annular frame in a manner that said ring is movably up and down supported by a resilient member so as to allow the moving toward said reference level board.
3. The tone wheel testing apparatus as set forth in claim 1 or

2, further comprising:

a reference encoder detecting a rotation number per a unit time of said tone wheel of said object, said object being rotated accompanying said chucking means rotating,

a processing means for determining whether said tone wheel of said object is good or bad by comparing the information obtained from said standard encoder with the information obtained from said magnetic testing sensor.

4. Test method of a tone wheel attached to an object to be tested, using a tone wheel testing apparatus,

wherein said tone wheel testing apparatus comprises a surface adjusting means for holding in the horizontal position an annular object to be tested to which a tone wheel is attached, said means comprising a pair of pressing members between which said object is held, the one of said pressing member having a reference surface with which said tone wheel is contacted in order to make said tone wheel align in the rotary axis direction of said object,

a rotatable chucking means for seizing said object so as to make the center of said object align with its rotary center when said object is held by said surface adjusting means, and a magnetic testing sensor disposed adjacent to said tone wheel of said object so as to face each other, and

wherein said method comprises the steps of;  
holding said object horizontally by said surface adjusting means, in a manner that said reference surface contacts with said tone wheel set on said positioning ring so as to keep said tone wheel align in the rotary axis direction of said object,  
seizing said object by said rotatable chucking means when said object is held by said surface adjusting means so as to make the center of said object align with that of said chucking means,

rotating said rotatable chucking means and measuring the signal detected by operation of said magnetic testing sensor.

5. The test method of a tone wheel attached to an object to be tested, as set forth in claim 4,

wherein said pair of surface adjusting means comprise a positioning ring and a reference level board, and said rotatable chucking means comprises an annular frame and chucking jaws capable of moving in and out in its base body, said positioning ring being movable up and down supported by a resilient member so as to allow the moving toward said reference level board, and

wherein the step of holding said object is performed by executing following steps;

setting said object on said positioning ring; and  
moving said reference level board down until said resilient member is compressed enough to resiliently press said object by contacting with said reference level board.

6. The test method of a tone wheel attached to an object to be tested, as set forth in claim 5,

wherein said annular frame functions as a stopper when said reference lever board is moved down toward said tone wheel of said object.